

REMARKS

Applicants have amended claims 1, 5, 6, 10, 11, 13, 17, and 19 to more particularly point out and distinctly claim the subject matter which they regard as their invention. Applicants have also rectified a number of deficiencies in the Specification. No new matter has been introduced by the above amendments.

Claims 1-19 are currently pending. Reconsideration of the application, as amended, is respectfully requested in view of the remarks below.

The specification is objected to under 37 C.F.R. 1.71 on six grounds. See the Office Action, page 2, line 3 to page 3, line 7. Applicants traverse each ground below:

(1) The Examiner points out that the following three phrases in the Specification are not clearly understood: (1) "... production balance ..." (page 2, line 2); (2) "... shutting off oxygen in the presence of an inorganic compound ..." (page 2, line 18); and (3) "... finely dividing the fractions of a distillation" (page 3, line 10). See the Office Action, page 2, lines 6-8. Applicants have rectified these three deficiencies.

(2) The Examiner indicates that "with specific reference to claim 1, for example: 'high purity,' 'excellent [in] hue,' 'mixed alkanolamine' [are not clearly understood]." See the Office Action, page 2, lines 8-9. Applicants have removed the phrases "high purity" and "excellent in hue" from claim 1. The term "mixed alkanolamine" refers to a mixture containing a monoalkanolamine, a dialkanolamine, and a trialkanolamine. See, e.g., original claim 9 and page 5, lines 23-25 of the Specification. Applicants submit that the meaning of the term "mixed alkanolamine" is clear.

(3) The Examiner points out that "with reference to claim 1, it is also not understood exactly how many different methods are claimed with regard to the step of producing a mixed alkanolamine. That is, is the step of '... or by the reaction of an alkylene oxide with liquid ammonia in the presence of the zeolite catalyst and a reaction of an alkylene oxide with aqueous ammonia ...' one step/method or two?" See the Office Action, page 2, lines 9-14. Applicants have amended claim 1 to clearly point out that the production of the mixed alkanolamine is accomplished by one of the following two methods: (i) a reaction of an alkylene oxide with liquid ammonia in the presence of a zeolite catalyst, and (ii) a reaction of an alkylene oxide with

liquid ammonia in the presence of a zeolite catalyst and a reaction of an alkylene oxide with aqueous ammonia. Note that method (ii) includes two reactions.

(4) The Examiner indicates that “[i]t is also not understood if the low-boiling substance [recited in claim 1] is a substance for removing unreacted ammonia, water, etc., or if it, in fact, refers instead to the unreacted ammonia, water, etc. itself ... particularly so since there is no step of adding a low-boiling substance. (It would appear from the Specification, however, that the addition of a low-boiling substance is the crucial limitation of applicant’s claimed invention.)” See the Office Action, page 2, lines 14-19. Applicants have removed from claim 1 the phrase “a step of removal of a low-boiling substance for” and included in claim 1 the phrase “to obtain a mixture of deprived of low-boiling substances.” Claim 1, as amended, clearly indicates that “low boiling substances” refers to unreacted ammonia, water, a monoalkanolamine, and a dialkanolamine generated during the production of a mixed alkanolamine. Note that the “addition of a low-boiling substance” mentioned by the Examiner refers to the addition of a low-boiling compound during the process of refining a trialkanolamine after unreacted ammonia, water, a monoalkanolamine, and a dialkanolamine are removed from a mixed alkanolamine. See, e.g., claim 11.

(5) The Examiner points out that “it is not understood if there is more than one high-boiling substance being removed since, in the first clause of this step, the noun and verb are singular and in the second clause the verb is plural (... a step of removing a high-boiling substance, which have ...).” See the Office Action, page 2, line 19 to page 3, line 2. To promote clarity, Applicants have replaced the word “have” recited in the phrase “a step of removing a high-boiling substance, which have ...” with “has.”

(6) The Examiner indicates that non-standard English grammar is used in the following phrase: “... a new process has been appeared (page 2, line 8).” See the Office Action, page 3, lines 5-7. This deficiency has been rectified.

Applicants submit that the objections set forth by the Examiner have been overcome and ask that all pending claims be examined in view of the above amendments and remarks.

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Enclosed is a check for the Petition for Extension of Time fee. Please apply any other charges to deposit account 06-1050, referencing Attorney's Docket No.: 08917-094001.

Respectfully submitted,

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